

Missouri Department of Natural Resources



PUBLIC NOTICE

DRAFT MISSOURI STATE OPERATING PERMIT

DATE: October 6, 2006

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources (MDNR), as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed effluent limitations and/or determinations are invited to submit them in writing to the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552, ATTN: G. Irene Crawford, Regional Director. Please include the permit number in all comment letters.

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by November 3, 2006 or received in our office by 5:00 p.m. on November 6, 2006. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

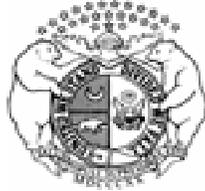
Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at DNR's website, <http://www.dnr.mo.gov/env/wpp/index.html>, or at the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Macon, Missouri 63552.

Public Notice Date: October 6, 2006
Permit Number: MO-0133183
Northeast Regional Office

FACILITY NAME AND ADDRESS	NAME AND ADDRESS OF OWNER
Shepherd Hills Subdivision Shepherd Hills Road Jefferson City, MO 65101	Shepherd Hills Sanitary Sewer Company 4810 Shepherd Hills Road Jefferson City, MO 65101
RECEIVING STREAM & LEGAL DESCRIPTION	TYPE OF DISCHARGE
Unnamed tributary to Moreau River Moreau River (P) (00941) Sec. 2, T43N, R12W, Cole County	Domestic, new

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0133183

Owner: Shepherd Hills Sanitary Sewer Company
Address: 4810 Shepherd Hills Road, Jefferson City, MO 65101

Continuing Authority: Same as above
Address: Same as above

Facility Name: Shepherd Hills Subdivision
Facility Address: Shepherd Hills Road, Jefferson City, MO 65101

Legal Description: SE ¼, NE ¼, NW ¼, Sec. 2, T43N, R12W, Cole County
Latitude/Longitude: +3830307/-09213084

Receiving Stream: Unnamed tributary to Moreau River (U)
First Classified Stream and ID: Moreau River (P) (00941)
USGS Basin & Sub-watershed No.: (10300102-220002)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 - Subdivision - SIC #4952
Septic tanks/recirculating sand filter/seasonal disinfection:chlorination and dechlorination/septage disposal by contract hauler to Jefferson City WWTP.
Design population equivalent is 159.
Design flow is 15,910 gallons per day.
Design sludge production is 1.11 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

Expiration Date
MO 780-0041 (10-93)

G. Irene Crawford, Director, Northeast Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				PAGE NUMBER 2 of 4		
				PERMIT NUMBER MO-0133183		
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/month	24 hr. estimate
Biochemical Oxygen Demand ₅ **	mg/L		45	30	once/ month	composite***
Total Suspended Solids**	mg/L		45	30	once/ month	composite***
pH – Units	SU	****		****	once/ month	grab
Ammonia as N	mg/L	*		*	once/ month	grab
Temperature	°C	*		*	once/ month	grab
Fecal Coliform (Note 1)	#/100 ml	1000		400	once/ month	grab
Total Residual Chlorine (Note 2)	mg/L	0.019 (0.13ML)		0.010 (0.13ML)	once/ month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** This facility is required to meet a removal efficiency of 85% or more.
- *** A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.
- **** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

Note 1 - Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

- (a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The department has determined the current acceptable ML for total residual chlorine to be 0.13 mg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
- (b) Disinfection is required year-round unless the permit specifically states that “Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.” If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.
- (c) Do not chemically dechlorinate if it is not needed to meet the limits in your permit.
- (d) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as “0 mg/L” TRC.

C. INFLUENT MONITORING REQUIREMENTS		PAGE NUMBER 3 of 4	
		PERMIT NUMBER MO-0133183	
The facility is required to meet a removal efficiency of 85% or more. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:			
SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Influent</u>			
Biochemical Oxygen Demand ₅	mg/L	once/ month	composite***
Total Suspended Solids	mg/L	once/ month	composite***
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE _____.			

MO 780-0010 (8/91)

C. INFLUENT MONITORING REQUIREMENTS (continued)

*** A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

D. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to area-wide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
5. Report as no-discharge when a discharge does not occur during the report period.

D. SPECIAL CONDITIONS (continued)

6. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
- (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

8. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.



Missouri Department of Natural Resources
Water Protection Program
Water Pollution Control Branch
NPDES Permits and Engineering Section

Water Quality Review Sheet
Facilities with Design Flow < 22,500 gpd
Determination of Effluent Limits

FACILITY INFORMATION

FACILITY NAME: Shepard Hills Estates PERMIT #: New

FACILITY TYPE/DESCRIPTION: 18,000 GPD WWTP (Extended Air)

EDU*: Ozark/Moreau/Loutre 8-DIGIT HUC: 10300102 COUNTY: Cole

*Ecological Drainage Unit

LEGAL DESCRIPTION: SW NE NW, SEC2, T43N, R12W LATITUDE/LONGITUDE: +3854520/-09251436

WATER QUALITY HISTORY: None, new facility

OUTFALL CHARACTERISTICS

OUTFALL	DESIGN FLOW (GPD)	TREATMENT TYPE	EFFLUENT TYPE
001	18,000	Secondary	Domestic

If facility design flow \geq 22,500 gpd or effluent type is not municipal or domestic wastewater, a formal water quality review sheet must be completed.

RECEIVING WATERBODY INFORMATION

WATERBODY NAME: Tributary to Moreau River CLASS: U

WATERBODY NAME: Moreau River CLASS: P

Discharge to or within two (2) miles of a losing stream (10 CSR 20-7.031, Table J or as determined by GSRAD)

Discharge to or within two (2) miles of a classified waterbody designated for whole body contact recreation

Use Attainability Analysis Conducted

If the facility discharges to any of the waterbody types below, is within an area experiencing rapid development, or if a site-specific water quality impact study has been conducted, this form is not applicable.

Lake/Reservoir 303(d) Waterbody Metropolitan No-Discharge Stream

Outstanding National/State Resource Water and Drainages Thereto

PERMIT LIMITS AND INFORMATION

OUTFALL #001

DISCHARGE TO OR WITHIN TWO (2) MILES OF A CLASSIFIED WATERBODY DESIGNATED FOR WHOLE BODY CONTACT RECREATION

PARAMETER	UNITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MONITORING FREQUENCY
FLOW	GPD	*		*	Once/Month
TEMPERATURE	°C	*		*	Once/Month
BOD ₅	MG/L		45	30	Once/Month
TSS	MG/L		45	30	Once/Month
pH	S.U.	6 – 9		6 – 9	Once/Month
AMMONIA AS N	MG/L	*		*	Once/Month
FECAL COLIFORM	NOTE 1	1000		400	Once/Month
TRC	MG/L	0.019		0.010	Once/Month

Note 1 – Colonies/100 mL, * – Monitoring Requirement Only

Please report the date, time, and location for each parameter sampled along with the average daily flow (actual flow measured or estimated, not design flow). All the parameters should be sampled on the same day and within no more than a 2-hour period. If discharge is contingent on storm events, rainfall should be measured every time there is a discharge.

DERIVATION AND DISCUSSION OF LIMITS

- **Biochemical Oxygen Demand (BOD₅)** – 10 CSR 20-7.015(8)(B)1.
- **Total Suspended Solids (TSS)** – 10 CSR 20-7.015(8)(B)1.
- **pH** – 10 CSR 20-7.015(8)(B)2.
- **Ammonia as Nitrogen** – Monitoring Requirement Only.
- **Fecal Coliform** – 10 CSR 20-7.015(8)(B)4.A. All classified waters in Missouri shall be designated for Whole Body Contact Recreation. Operating permits issued following this rule will contain effluent limits for applicable bacteria criteria.
- **Total Residual Chlorine (TRC)** – Effluent limitation for the protection of aquatic life against acute toxicity during critical low-flow conditions and minimal dilution [10 CSR 20-7.031(3)(I)1.]

Standard secondary treatment technology based limits for BOD₅, TSS, pH, and fecal coliform are assumed to be protective of the receiving stream based on the small size of the proposed discharge. Monitoring for temperature and ammonia are included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Permit will contain a “reopener clause” to address potential water quality issues should this or other monitoring or observations indicate water quality standards may be exceeded or if existing designated uses may be negatively impacted due either in whole or in part to this discharge. Should chlorine be used at this facility, the effluent shall be dechlorinated to meet the above referenced limits. Alternate TRC limits protective of aquatic life against acute and chronic toxicity may be submitted to the department for consideration.

Reviewer: John Hoke

Date: August 30, 2006

Approver: Refaat Mefrakis